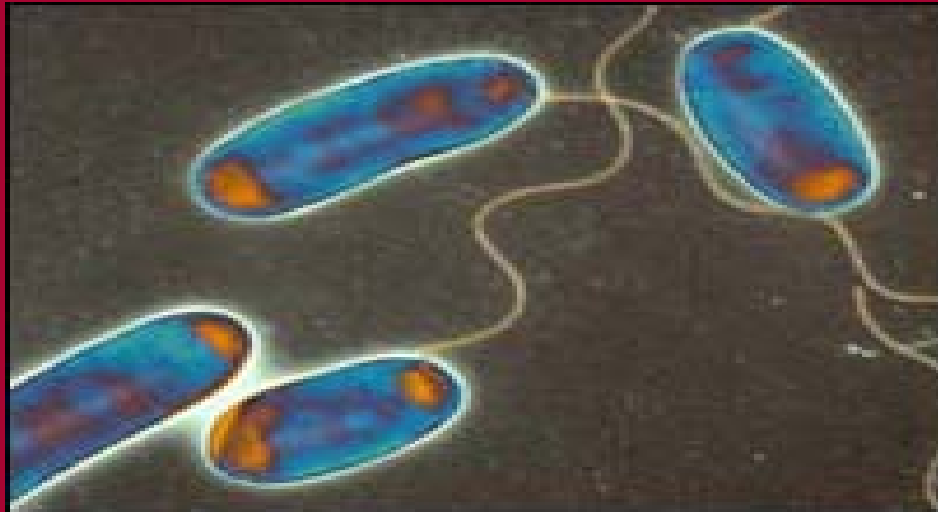


# *Control of Legionella*



*Rom Naplocha*  
*HM Inspector*  
*HID CI3E*

# Preventing and controlling the risk

- Removal of pack for cleaning
- ACOP para 54(e) requires
  - *Maintenance of the cleanliness of the system and the water in it*
- Draft technical bulletin
  - Peer review/consultation exercise
  - Publication on HSE website

# Guidance

- Para 81(d) *“those parts of the tower which become wet should be accessible for cleaning: packs should be readily removable and easily dismantled”*
- Para 138 *“...with all accessible areas of the tower etc being adequately cleaned. Where practicable the packs should be removed at least once a year and preferably every 6 months. If this is not practicable it may be necessary to apply supplementary strategies”*

# Technical Bulletin

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- L8 requires to water system to be kept clean, and that procedures must be in place to ensure this
- If it is claimed a water treatment regime in place maintains the system in a clean state (i.e no scale, deposit, rust or biofilm) this must be demonstrable.

# Removal of pack from cooling towers for cleaning and disinfection

- Evidence
  - Endoscopy
  - Photographs
  - Weight of pack
  - Representative
  - Swabbing
  - Frequent monitoring



# Pack removal

- Impracticable rather than inconvenient
- If valid reasons
  - Supplementary water treatment strategies must be in place to ensure the cleanliness of the system
- In the majority of situations it will be practicable to remove the pack

# Removal of pack from cooling towers for cleaning and disinfection



# Where practicable

- Initial expectation that the pack will be removed for cleaning AT LEAST annually, and for it to be demonstrated that more frequent cleaning is not necessary
- An assessment of the risk from exposure to legionella should determine the frequency of pack removal based on
  - The water treatment regime
  - Local conditions

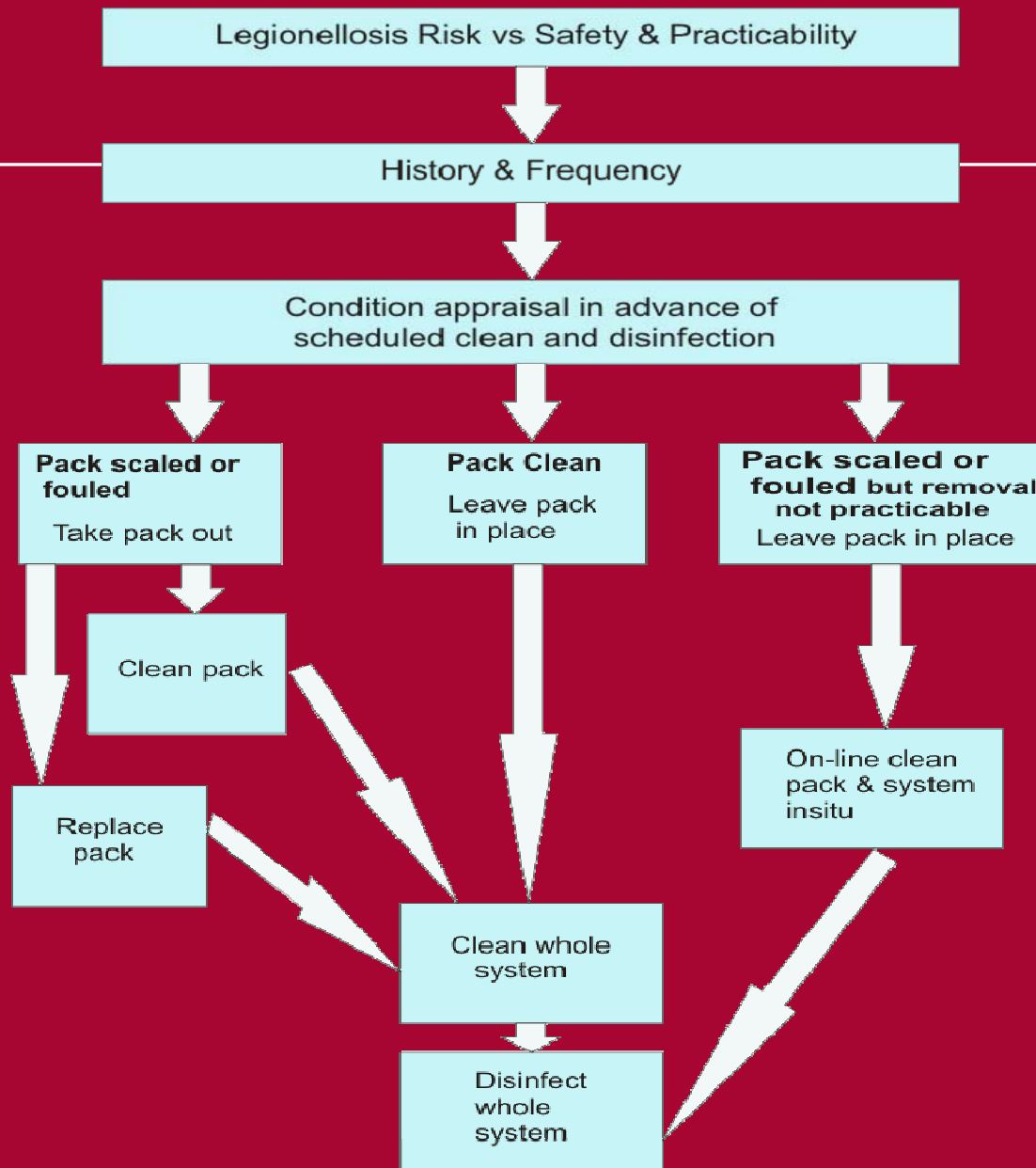
# Practicable

- Stricter standard applies
- Measures may be practicable which are not reasonably practicable
- Practicable means something other than physically possible
- Measures must be possible in the light of current knowledge and invention
- It is impracticable to take precautions against a danger that cannot be known to be in existence or to take precautions that have not yet been invented

# Water Management Society

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- Technical Committee
  - *Whilst no formal acceptance was proposed, BACS assented to the content and did not propose any changes*
  - *evidence-based approach*





COOLING TOWERS



**CAUTION**

Hydrogen sulfide gas may evolve from the water at the base of the cooling tower basin.

Immediately leave the location if the alarm on the meter sounds.

Do not enter this area without a permit.

09/09/2004